International Journal of Education, Vocational and Social Science
https://e-journal.citakonsulindo.or.id/index.php/IJEVSS
E-ISSN : 2963 4954
IJEVSS

Internalizing Arabic Vocabulary through Independent Written Exercises for Elementary School Transition Readiness

Farah Zahra Ahnaf[1]
[1]Imam Asy-Syafi'i Islamic Institute of Indonesia
M. Ripani Saputra[2]
[2]Imam Asy-Syafi'i Islamic Institute of Indonesia

Corresponding Author : farahzahra1723@gmail.com,ripanisaputra14@gmail.com

Abstract

This study aims to describe the process of internalizing Arabic vocabulary in early childhood through routine independent written exercises as an effort to build academic transitional readiness for elementary school. Using a mixed-methods approach, this study involved 10 children aged 6 to 7 years at the Rumah Smart Nada Syifa non-formal institution. Data were collected through participatory observation, portfolio documentation, in-depth interviews, and cognitive achievement evaluation (post-test) consisting of five task variations. The results showed that routine independent written exercises were able to improve children's graphomotor flexibility from rigid to neater and more proportional. The synergy between classroom practice and stimulus reinforcement through homework proved effective in locking children's memory retention, with the cumulative average score of the learning group reaching 95.36. The practical implications of this teaching method provide a tangible contribution to building children's mental and academic readiness during the transition phase toward elementary school.

Keywords:Internalization, Arabic Vocabulary, Independent Written Exercises, Early Childhood, Transitional Readiness.

INTRODUCTION

Early Childhood Education is a crucial phase in stimulating various aspects of a child's development, particularly the introduction of multilingual literacy. Entering the age of 6, children enter a transitional period that demands more complex cognitive and motor skills for elementary school. For children preparing for elementary school, mastering the basics of Arabic is an academic

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

imperative to avoid falling behind in the future. Early introduction to Arabic is not merely for basic communication, but also a vital instrument for understanding religious literature and shaping students' character.(Taufik, 2011)The main challenge for teachers in the field is how to package Arabic language material, often considered rigid, into activities that are more flexible and easily absorbed by children.

In the learning process, embedding knowledge into long-term memory is known as internalization. Internalization is not merely understood as a mechanical memorization process, but rather a form of assimilation of knowledge into a child's cognitive structure through concrete learning experiences. Specifically for Arabic, recognizing letter symbols and vocabulary requires a method that integrates visual coordination with fine motor skills. The habit of independent written practice has been empirically proven to strengthen memory retention because it involves the sensory motor areas of the brain, resulting in a more permanent recording of letter forms than through visual observation alone.(Nurani, 2019).Thus, cultivating the habit of independent written practice is a key strategy to ensure that the vocabulary taught is truly internalized by children. This internalization process is not limited to the classroom but is expanded through assignments to be completed at home, known as homework. The assigned homework draws on material that has been collectively practiced, thus creating a continuous repetition ecosystem for children's cognition.

Nada Syifa's Smart House is a non-formal educational institution that seeks to reduce these barriers to Arabic literacy through a more adaptive approach, fostering independent writing practice. Arabic literacy stimulation at Nada Syifa's Smart House is carried out in stages, starting with the tactile-kinesthetic imitation (tracing) stage, followed by visual discrimination exercises to distinguish letter shapes, and ultimately leading to independent graphomotor imitation (copying).

Research on Arabic vocabulary introduction in early childhood has so far been dominated by the use of audiovisual-based media, digital games, and verbal-mechanical memorization methods. Little research has explored how physical-kinesthetic activities, such as encouraging independent written practice, can serve as a primary instrument in reinforcing children's cognitive memory. While the majority of contemporary research focuses on the use of digital media and interactive applications that do not explore fine motor skills in depth, this study reiterates the importance of conventional physical activity combined with visual reinforcement.(Hidayat, 2012). These media are indeed effective in attracting children's visual attention, but often do not explore the fine motor skills aspect in depth. Therefore, the scientific novelty in this study lies in the implementation of the habit of independent written exercises in stages (sequential tactical

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

learning) at Nada Syifa's Smart House. This research examines how Arabic literacy stimulation is not provided instantly, but rather through a tactile-kinesthetic transition phase (tracing), visual discrimination, and graphomotor independence (copying). Through a mixed methods approach, this study provides new contributions in the form of empirical evidence regarding the effectiveness of the synergy of kinesthetic exercises and strengthening long-term memory in transition-age children.

RESEARCH METHODS

This research uses a mixed methods approach, combining quantitative and qualitative data analysis. The researchers chose this method to ensure high-accuracy results, with numerical data supported by narrative explanations from the field. The use of this mixed method ensures that the resulting data complement each other and provide a complete picture.(Arikunto, 2016)This study examines the process of Arabic language internalization at Nada Syifa's Smart House. The subjects of this study were 10 children aged 6 to 7 years in the elementary school transition preparation study group at the non-formal Nada Syifa Smart House institution. In its implementation, the researcher implemented a systematic procedure that integrated the formal stages of the research with practical activities in the field, as follows:

1. **Steps for Determining Subjects and Objects through Observation or Observation**

   The initial stage of research implementation was conducted through direct, participatory observation during the learning process. Researchers closely observed the children's graphomotor and cognitive characteristics as class began, including postural readiness (sitting position), fine motor skills in holding a pencil, independence in completing written exercises, and their psychological responses when interacting with Arabic orthographic text in notebooks. Through these observations, researchers conducted tactical mapping to identify the level of enthusiasm and initial obstacles faced by each child. This direct observation approach is crucial for constructing a portrait of a safe, comfortable, and friendly learning environment for children in the transitional age group of 6 to 7 years.(Arikunto, 2016)Furthermore, these observational data serve as important indicators in evaluating the adaptability of the independent written practice method applied to the child's learning rhythm. Researchers also continuously monitored the dynamics of educational interactions between teacher and child to ensure that this foreign language stimulation was provided without psychological coercion that could hinder the child's potential for self-regulation.(Mulyasa, 2017).

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

2. Steps for Developing and Implementing Instruments through Routine Practice Habits

The second stage involved the development and testing of written practice instruments, which were conducted routinely every Thursday. In accordance with the principles of instrument development (Arikunto, 2016), the written exercises were carefully designed to measure the level of vocabulary internalization based on variations in children's adaptability. The instrument implementation procedure began with stimulation of writing basic hijaiyah letters as a mechanical foundation, before gradually progressing to complete Arabic vocabulary.

Technically, the instruments applied are divided into three forms of written exercises in stages (sequential tactical learning), namely:

A. The tactile imitation stage involves thickening (tracing) the orthography of letters or vocabulary that are deliberately printed faintly at the beginning of the session to reduce the child's psychological burden in recognizing new written forms.
B. Visual discrimination exercises by matching or connecting similar Arabic orthographic symbols according to the question instructions.
C. Graphomotor imitation stage (copying) by copying vocabulary independently.

This routine exercise is intended to train the flexibility of children's fine motor skills and brain function in recognizing letter construction patterns (James & Engelhardt, 2012). Neurologically, this habituation to written activities is conditioned to help children's visual-motor adaptation to the direction of Arabic orthography writing that moves from right to left (Hidayat, 2012). The composition of the material in this instrument is distributed in stages (spaced learning) every week to optimize long-term memory retention without burdening children's cognitive capacity (Taufik, 2011), while also being designed as an instrument to strengthen children's physical motor readiness before the transition to elementary school (Nurani, 2019).

3. Data Collection Steps through Documentation

The third stage is the collection of physical and visual document-based data to track the final results of the subjects' cognitive and fine motor development. Considering that the process of habituating independent written exercises at Nada Syifa's Smart House has been ongoing cumulatively over a long period of time (almost a year) with a very large volume of notebook documents, the researcher determined the cognitive achievement evaluation sheet (post-test) as the main physical documentation instrument. The collection of post-test sheets

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

consisting of five variations of independent written assignments functions as objective, authentic, and theoretical physical evidence to measure the results of children's actual work in the field after going through a series of continuous learning programs.(Arikunto, 2016; Moleong, 2017).

In addition to written documents, researchers supplemented the data through selective visual documentation taken in limited quantities under certain conditions, specifically during moments when children were practicing writing Arabic orthography on the classroom blackboard. This restriction of visual documentation activities during class hours was deliberate because the researchers were committed to maintaining full focus on instructional assistance without the intervention of mobile devices (cell phones). The combination of information from daily notebook practice schemes, post-test physical portfolios, and this visual documentation was designed to allow researchers to precisely cross-verify all parameters of children's literacy development without neglecting any evaluation data.(Rohmawati, 2019). Through this final results sheet, researchers can detect the physical manifestation of the stability of the proportions of handwritten line drawing as well as the child's ability to construct connected Arabic letters as a real reflection of the visual-semantic memory retention process that has been absorbed during the learning process.(Sadoski & Paivio 2013).

4. Quantitative Data Analysis Steps through Post-Test

The fourth stage is the implementation and analysis of quantitative data sourced from the cognitive achievement evaluation sheet (post-test). This test is conditioned as an adaptive, independent written evaluation to monitor the level of long-term memory retention of children for Arabic numeral orthography and vocabulary ('adad) from 1 to 5.(Paivio, 2014). This post-test instrument is designed efficiently and comprehensively into one complete task sheet that includes 5 parts of assessment indicators (Parts A, B, C, D, and E) with the following technical details:

A. Sections A and B (Numerical-Linguistic Symbol Connection Exercise): Section A tests children's ability to connect Indonesian number names (One to Five) with Arabic numeral symbols (1 to 1). Section B tests the ability to connect common number symbols (1 to 5) with Arabic numeral symbols. These two sections serve to measure children's visual discrimination and early cognitive readiness in aligning numerical symbols across languages.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

B. Parts C and D (Orthographic Meaning Association Exercise): Part C tests children's visual adaptation in connecting Arabic number symbols with Arabic number orthographic texts (lafadz 'adad such as wāḥid to khamsah). Part D tests children's semantic memory by connecting the orthographic text of Arabic numbers directly to their Indonesian meaning.
C. Section E (Independent Graphomotor Production Exercise): Section E is the core instrument for measuring children's fine motor skills and independence. Children are instructed to manually reproduce or rewrite Arabic numeral symbols in stimulus boxes and to write the complete orthographic text of Arabic numerals on the lines provided without the aid of a reference text (independent copying).

This integrated evaluation of five exercise variations in one sheet is applied to obtain cognitive performance data and objectively map the level of children's learning independence.(Nurgiyantoro, 2015). Next, the quantitative data obtained from the cumulative post-test scores were processed using simple descriptive statistical techniques to calculate the average (mean) value of the study group as an indicator of the empirical success of the independent written practice method implemented at Nada Syifa's Smart House.(Arikunto, 2016).

5. Steps for Drawing Conclusions and Validation through Interviews

The fifth and final stage of qualitative data collection was conducted through in-depth interviews to triangulate data and validate research results. Given that the researcher acted as the primary instructor in the study group, structured interviews were conducted with the administrator, who is the founder of the non-formal institution, Rumah Cerdas Nada Syifa. The focus of these interviews was to verify and validate whether the implemented independent written practice scheme based on Arabic numeral conversion and alphabetization (Parts A to E) met the institution's quality standards and operational procedures. This confirmation step was crucial to deepen the researcher's theoretical understanding of the performance data obtained in the field.(Arikunto, 2016). In addition, feedback from the institution's management is used to analyze the adaptability and acceptability of this teaching innovation so that it remains aligned with the institution's vision, mission, and academic transition achievement targets.(Creswell, 2015).

To gain a comprehensive perspective, researchers also conducted casual guided phenomenological interviews with the children after the evaluation. Researchers explored each

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

child's subjective responses regarding their perceived ease and psychomotor challenges when completing various symbol connection tasks, meaning associations, and independent graphomotor production of Arabic text. This emic approach was implemented so that researchers could capture the reality of the learning experience directly from the children's perspective (children's voice), thereby minimizing researcher subjectivity.(Denzin & Lincoln, 2017).Through this simple verbal confirmation, researchers can identify micro-barriers, levels of self-regulation, and dynamics of cognitive progress that are not visually detected through pencil marks on the post-test sheet alone.(Kurniawan, 2021).

RESULTS AND DISCUSSION

Researchersconducted an evaluation of cognitive achievement using a formative test instrument (post-test) consisting of five written exercise differentiations to map the level of memory retention as well as the subject's linguistic adaptation ability. Quantitative data processing in this study was carried out systematically through three stages of standard descriptive statistical calculations, namely:

A. The First Stage is Calculating the Accumulative Value of Individual Children (Horizontal Analysis)

The initial step in this quantitative analysis is aimed at measuring the average competency capacity of each child individually based on the accumulation of all indicators of the independent written exercises (Exercise 1 to Exercise 5) tested. This individual score reflects the final results of the subject's personal memory retention and fine motor adaptation. Referring to the descriptive statistics theory by Arikunto (2016), the calculation of this individual average (mean) is used to obtain a general picture of each child's level of mastery of the test instrument given. Data calculations are carried out mathematically by adding up the achievement scores of one child from Exercise 1 to Exercise 5, then dividing by the total task components (5 parts of the exercise) using the following formula:

Formula: Y = (Value of Exercise 1 + Exercise 2 + Exercise 3 + Exercise 4 + Exercise 5) / 5 or can be written mathematically: $Y = \Sigma Xi / n$

Information:

Y = Accumulative Average Value of Individual Children.

ΣXi = Total number of scores of one child from Exercise 1 to Exercise 5.

n = Number of written exercise components (5 exercises).

For example, in the analysis of the accumulated scores of Child 1 who obtained perfect scores

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

on all instrument components, the operational calculation is as follows:
Total Score of Child 1 = 100 + 100 + 100 + 100 + 100 = 500
Y = ΣXi / n
Accumulative Average Value of Child 1 = 500 / 5 = 100

B. The second stage is to calculate the average per part of the question (vertical analysis)

The second step in this quantitative analysis was carried out to identify which types of tasks or variations of indicators were most mastered classically and which parts were most challenging for the 10 children in the study group. Based on the concept of basic descriptive statistics according to Sugiyono (2018), the group mean analysis technique was used to provide an explanation of the achievement conditions of a group based on the average value (mean) of the subjects studied. Accumulated data was obtained vertically by adding up the achievement scores of all children on a particular part of the question, then divided by the total number of subjects (10 children) using the following statistical formula:
Formula: X = (Total Score of All Children in One Section of the Question) / (Total Number of Subjects) or can be written mathematically: X = ΣX / N
Information:
X = Average Score per Question Section.
ΣX = Total number of marks for all children on that part of the question.
N = Total number of students (10 children)
For example, in the analysis of the accumulated value of Exercise 5 (Independent Graphomotor Production Task), the calculation is carried out as follows:
X = (Value of Child 1 + Child 2 + ... + Child 10) / 10
X = (100+100+98+100+98+99+97+97+99+100) = 988 / 10
X = 988 / 10 = 98.8

C. The third stage is to calculate the final average total of the study group (overall cumulative analysis)

The final step in this quantitative analysis serves to draw objective general conclusions regarding the effectiveness of the independent written practice method applied classically. This overall accumulative value (grand mean) serves as the main quantitative indicator to measure the extent to which the learning intervention impacts the total ability of all subjects in non-formal institutions. In line with the application of basic descriptive statistical methods

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

from Arikunto (2016) and Sugiyono (2018), data is obtained by adding up the individual accumulative average values of the ten children, then dividing by the total number of subjects (10 children) using the following descriptive statistical formula:

Formula: Z = (Total Accumulative Value of All Children) / (Total Number of Subjects) or can be written mathematically: Z = ΣY / N

Information:

Z = Total Average Final Score of Study Group.

ΣY = Total cumulative value of 10 children.

N = Total number of children (10 children).

Based on the field data obtained, the operational calculations to determine the final achievement of the study group are as follows:

Total Class Score = 100 + 100 + 99.6 + 100 + 99.6 + 75.8 + 99.4 + 99.4 + 99.8 + 80 = 953.6

Final Average Score of Study Group = 953.6 / 10 = 95.36

Based on the three stages of quantitative data analysis, the track record of evaluation value achievements and the results of the distribution of final values for the development of orthographic literacy of numbers and Arabic numerals of the ten children at Nada Syifa's Smart House through the post-test instrument are presented transparently in Table 1 below:

Table 1. Distribution of Cognitive Achievement Scores for Early Childhood Arabic Numbers and Orthography through the Post-Test Instrument

Subject	Mark Exercise 1	Mark Exercise 2	Mark Exercise 3	Mark Exercise 4	Mark Exercise 5	Child's Accumulative Value (Individual Average)
Child 1 (man)	100	100	100	100	100	100
Child 2 (man)	100	100	100	100	100	100
Child 3 (man)	100	100	100	100	98	99.6
Child 4 (man)	100	100	100	100	100	100

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Child 5 (man)	100	100	100	100	98	99.6
Child 6 (man)	60	60	60	100	99	75.8
Child 7 (man)	100	100	100	100	97	99.4
Child 8 (Woman)	100	100	100	100	97	99.4
Child 9 (Woman)	100	100	100	100	99	99.8
Child 10 (Woman)	100	0	100	100	100	80
Class average	96	86	96	100	98.8	**Total Average:**95.36

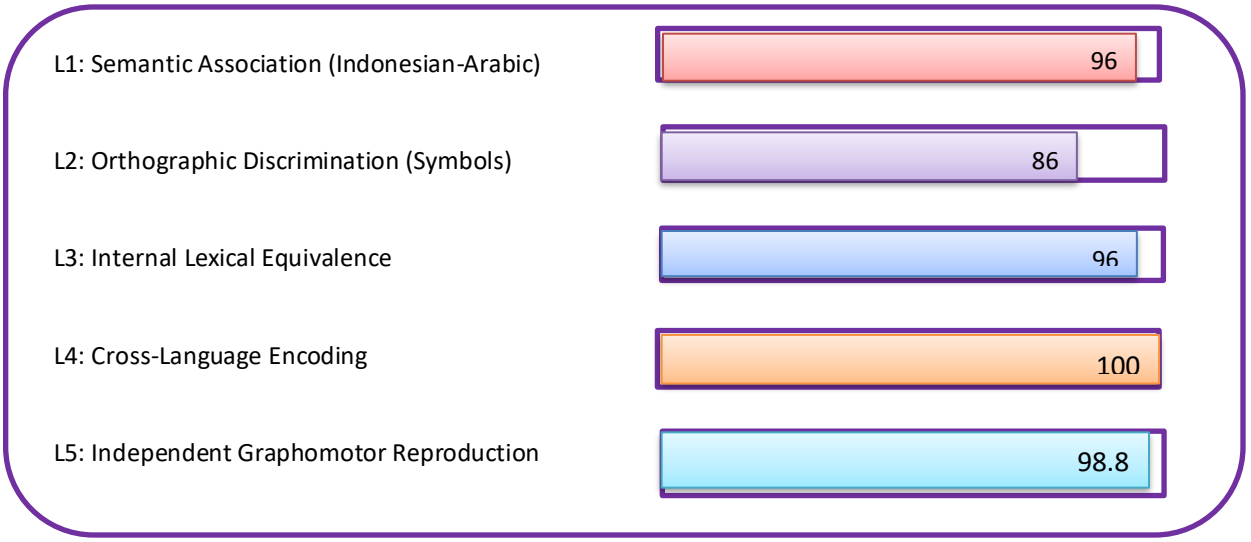


Figure 2. Bar graph of the average achievement scores for five exercises in the orthography of Arabic numbers and numbers

Based on the achievement data in Table 1 above, the accumulated results of the final evaluation of the cognitive development of Arabic numerals and numbers in early childhood indicate excellent group performance. The sharpness of memory retention and the level of

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

learning independence of the ten subjects were mapped in detail through five types of tiered exercises with the following results: Exercise 1 (Indonesian-Arabic Semantic Association), the study group achieved a class average score of 96. This high achievement objectively proves that the early cross-language lexical encoding technique is quite effective in building a cognitive bridge between the mother tongue and a foreign language in the memory of most children. Furthermore, in Exercise 2 (Symbol Orthographic Discrimination), children were asked to connect common number symbols with Arabic numeral symbols. The results in the table show an average group score of 86. The occurrence of a classical decline in scores in this exercise was triggered by factors of visual morphological similarities in several Arabic numeral symbols, as well as the inaccuracy factor of two children who rushed to complete the exercise without rechecking their work. The researcher deliberately did not provide direct intervention to measure their original accuracy. In Exercise 3 (Internal Lexical Equivalence) which tests the relationship between Arabic numeral symbols and their Arabic orthographic text (lafazh 'adad), the children managed to obtain a very satisfactory average score of 96. Then in Exercise 4 (Cross-Language Encoding) which asks children to connect the Arabic text directly to its Indonesian meaning, all subjects (100%) showed very high association accuracy with a perfect average score of 100, without experiencing any distortion of meaning. Finally, in Exercise 5 (Independent Graphomotor Reproduction) which has the highest level of cognitive and motoric difficulty because children have to rewrite Arabic symbols and lafazh independently without the help of reference texts, this study group achieved an average score of 98.8. Cumulatively, the total final average score of the study group from the entire series of independent written exercises at Nada Syifa's Smart House managed to reach 95.36.

Based on the data visualization in Figure 2, it is clear that there are fluctuations (ups and downs) that form the trend of children's cognitive abilities from Exercise 1 to Exercise 5. This bar graph shows conceptually which parts are easiest for the learning group to master and which parts are the biggest sociomotor challenges for them.

The highest trend is shown by the bar in Exercise 4 (100), which has reached a perfect score. This provides a strong visual illustration that children aged 6 to 7 years have a very mature visual discrimination sensitivity when asked to match number symbols and cross-language vocabulary using the line drawing technique. In contrast, a significant decrease in the graph is seen in Exercise 2 (86). The decrease in the height of the bar in Exercise 2 is considered methodologically reasonable because the shape of the Arabic numeral symbols is similar. And another reason for this decrease in the graph is the inattention of two children who wanted to finish the exercise quickly but forgot to check the exercise. The researcher, who is also a teacher

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

who was directly involved in the field, deliberately did not personally inform that there was an error in the exercise because he wanted to directly observe the level of accuracy of each child. Through visual observation of this graph, it can be concluded that the continuous written practice intervention has proven successful in maintaining the stability of the class' average performance score, remaining in the very good category (95.36).

The Process of Internalizing Arabic Vocabulary through Structured Writing Practice Activities

The research conducted at Nada Syifa's Smart House aims to describe the process of internalizing Arabic vocabulary in children aged 6 to 7 years through the practice of independent written exercises. Based on a mixed methods approach, this section presents a qualitative description of the results of observations, documentation, and interviews, integrated comprehensively with quantitative data in the form of evaluation scores (post-test).

In the early stages of learning, observations show that young children often experience motor and cognitive difficulties when first exposed to the hijaiyah letter forms. The characteristics of Arabic writing, which moves from right to left and has a curvy structure, require a high level of visual-motor adaptation from children. In response to these obstacles, the application of the dot-helix tracing technique on the hijaiyah letters has been proven to minimize the mental burden on children when learning a foreign language. This independent written practice activity is carried out every morning from 8:00 to 10:30 WIB.

Nada Syifa's Smart House, a non-formal institution dedicated to 21 years of development, consistently implements fine motor stimulation methods for children in every morning session through independent handwriting-based written exercises. In this institution, written exercises are presented in stages according to each child's ability level. Nada Syifa's Smart House has compiled an internal guidebook divided into Preparation 1, Preparation 2, Level 1, Level 2, and Level 3. At Level 3, children begin intensive training to answer the available application questions. After completing all stages at Level 3, children continue their practice directly using notebooks. The exercise material in the notebooks is written manually by teachers with a variety of question formats as a strengthening instrument for their transition to Elementary School.

Technically, the learning activities every Thursday are focused on practicing writing the hijaiyah letters. This routine activity begins with bolding basic hijaiyah letters, which is then expanded to practice pairing hijaiyah letters that have similar shapes or are similar. Next, if the child is deemed capable of writing 3 to 6 hijaiyah letters in the previous column, the training model is advanced to the stage of activities following existing reference writing (copying) independently.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

For example, children are instructed to write the letters alif, ba', and ta' in the blank column provided. In certain sessions, assignments are also combined with practice writing hijaiyah letters accompanied by punctuation or harakat. This initial foundation training session runs flexibly for approximately 5 to 6 months by adjusting the rhythm of the child's response speed. Considering that there are variations in children who are quick to respond and those who need more time, the teacher always adjusts the learning program by reviewing the writing material from the previous session.

Once the mechanical competence of single letters is assessed as mature, the training model is advanced to activities that strengthen the entire Arabic vocabulary. The vocabulary selected is common words that children are familiar with or frequently encounter in everyday life, such as the names of objects in the learning environment, numbers, and other basic materials. This enrichment activity also takes place over a period of approximately 5 to 6 months. The subsequent training procedure is developed into connecting words with other words that have similar spelling. Afterward, children are given the challenge of copying the Arabic vocabulary according to instructions in the provided evaluation column or space.

This written assignment model is intentionally varied in format and problem type to prevent children from getting bored, but the substance still maintains the same material. For example, exercises on connecting numbers to their Arabic words can be varied by pairing Arabic number symbols with Indonesian number symbols. Meanwhile, if the material is vocabulary, the assignment format is changed to match visual stimuli with corresponding Arabic words. The highest point of achievement in children's performance is detected when they are able to correctly identify and connect the corresponding Arabic word with the available picture or real object. This success is a theoretical indicator that children have indirectly internalized Arabic vocabulary very well through regular, structured repetition of the exercises, which has a positive long-term impact.

Through this structured activity every Thursday morning, children actively coordinate their eyes and hands. This tactile-kinesthetic activity gradually transforms fine motor stiffness into consistent flexibility. Analysis of the children's worksheet portfolio documents revealed significant physical progress: the children's handwriting, which was initially slanted and broken, transformed into neater, more proportional strokes with a high level of legibility. Children who initially had difficulty writing basic hijaiyah letters are now more skilled at arranging and connecting letters into complete vocabulary. This manual writing activity effectively stimulates strong cognitive representations in children's memories.

This empirical finding aligns with contemporary research by Prabowo & Sari (2026) in the

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

Journal of Community Service and Educational Research, which asserts that innovative Arabic language learning for early childhood based on concrete and contextual activities has been proven effective in extending long-term memory retention and improving children's language readiness before entering formal school. The repetitive yet enjoyable nature of this routine writing activity ensures that the introduction of new vocabulary does not become merely a superficial and easily faded mechanical memorization, but is naturally internalized into the child's cognitive structure.

Theoretical Discussion: Conventional Motor Skills as a Bridge to Literacy Transition

Amidst the onslaught of modern educational trends that rely heavily on digital media and interactive apps, the findings at Nada Syifa's Smart Home offer a crucial counterpoint. Digital media excels at instantly capturing children's visual attention, but is passive in developing fine motor skills. Conversely, reactivating motor activity through handwriting exercises provides tactile stimulation that digital screens cannot replace. When children move a pencil to form Arabic letters, the motor-sensory areas of their brains are simultaneously activated. This manual process connects the visual memory of letter shapes with the kinesthetic memory of hand movements.

This theory is reinforced by the Dual Coding concept, which states that knowledge absorption will be much more permanent if stored through two mutually supporting sensory codes: visual aspects and physical-motor actions. This aligns with a study by Rahmawati, Zukhaira, & Busri (2023) in the journal Lisanul Arab, which states that although the development of interactive visual-based media is important for initial appeal, holistic mastery of Arabic literacy in early childhood still requires strengthening the productive (psychomotor) aspect so that the instillation of new vocabulary can be structurally embedded in children's cognition. Therefore, religious and foreign language materials taught little by little, flexibly and routinely every week have been proven to be much more memorable in children's long-term memory.

Validating Children's Barriers and Feelings through a Collaborative Perspective

Based on an in-depth interview conducted with the owner and manager of Nada Syifa's Smart House, this gradual, independent written practice method was declared to have met the institution's standard procedures, even providing more adaptive content updates to prepare children for elementary school. As stated directly by the owner of the institution in the interview: "This gradual, independent written practice method really helps bridge the gap for children so they won't be shocked when they enter elementary school." (Interview, June 15, 2026). This micro-curriculum innovation is considered very much in line with the institution's vision and

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

mission of reducing barriers to Arabic literacy from an early age.

Meanwhile, the results of a light discussion after the training with the children revealed valuable psychological data. The children admitted to feeling happy when they succeeded in drawing connecting lines in the drawings and felt proud when the teacher assessed their handwriting as correct and neat. This was reflected in the confession of one of the children, Ananda H (7 years old), who expressed feeling “happy” during the intervention process and felt the development of his writing skills, where the process felt “difficult at first, because with frequent practice it became easier” (Interview, June 15, 2026).

A minor obstacle encountered in the field was complaints of slight hand muscle fatigue in the first few minutes, which is a normal physiological reaction to the process of adapting to finger muscle flexibility. This physical limitation generally arises when children encounter complex Arabic orthographic structures, as complained by Ananda H, who found it difficult to "write his Arabic curves" (Interview, June 15, 2026). However, because the learning environment was designed without psychological pressure and took the form of cheerful assignments, the children did not feel mentally burdened. This positive emotional response plays a crucial role, as children's psychological comfort in the learning environment triggers their cognitive openness to absorb new language systems more quickly, naturally, and supports their potential for self-regulation.

CONCLUSION AND SUGGESTIONS

Based on the results of data analysis and discussion, it can be concluded that the habit of structured independent written exercises is effective in internalizing vocabulary and the Arabic number and numeral orthography system in early childhood at Nada Syifa Smart House. The habit of continuous independent written exercises has been proven to be able to stimulate children's fine motor aspects, marked by changes in the flexibility of finger muscles when constructing Arabic orthography from initial stiff strokes to neater, more proportional, and consistent. The success of this cognitive internalization is validated by the achievement of an accumulative class average score of 95.36, with the highest and most satisfactory success rate dominated by the cross-language encoding aspect (Exercise 4), independent graphomotor reproduction ability (Exercise 5), and the process of semantic association and lexical equivalence (Exercise 1 and Exercise 3). Furthermore, it was found that giving structured homework has a crucial contribution as a medium of reinforcement (*reinforcement*) to reduce the risk of decreased memory retention in children. Practically, this habit of independent written practice successfully integrates sociomotor and cognitive aspects as crucial transitional curriculum preparation for children's mental and

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

academic readiness for elementary school.

In response to the research findings related to the process of children's fine sociomotor adaptation and the limited scope of research subjects at the Nada Syifa Smart House non-formal institution, the researcher formulated several constructive recommendations for related parties. For teachers and institution managers, it is recommended to formulate written worksheet visualizations that are much more varied and interactive in order to maintain the stability of early childhood learning motivation consistently. Meanwhile, the role of parents is expected to maintain the quality of supportive learning assistance at home, especially when guiding repetition of Homework assignments (PR) so that children's memory retention of new vocabulary is maintained in the long term. Finally, considering that this study used a limited number of samples at one non-formal institution, future researchers are advised to expand the scope of research subjects by involving a control group through a pure experimental method approach to test the effectiveness of this independent written practice method on a wider and more varied population scale.

BIBLIOGRAPHY

Arikunto, S. (2016). *Prosedur Penelitian Suatu Pendekatan Praktis*. Jakarta: PT Rineka Cipta.

Creswell, J. W. (2015). *Research Design: Pendekatan Kualitatif, Kuantitatif, dan Mixed*. Yogyakarta: Pustaka Pelajar.

Denzin, N. K., & Lincoln, Y. S. (2017). *The Sage Handbook of Qualitative Research*. Thousand Oaks: Sage Publications.

Hidayat, N. S. (2012). Problematika pembelajaran bahasa Arab. *Jurnal An-Nida: Jurnal Pemikiran Islam, 37*(1).

James, K. H., & Engelhardt, L. (2012). The effects of handwriting experience on functional brain development in pre-literate children. *Trends in Neuroscience and Education, 1*(1), 32–42.

Kurniawan, A. (2021). *Metodologi Penelitian Pendidikan*. Bandung: Remaja Rosdakarya.

Moleong, L. J. (2017). *Metodologi Penelitian Kualitatif*. Bandung: Remaja Rosdakarya.

Mulyasa, E. (2017). *Strategi Pembelajaran PAUD*. Bandung: Remaja Rosdakarya.

Nurani, Y. (2019). *Perspektif Baru Kurikulum Pendidikan Anak Usia Dini*. Jakarta: Kencana.

Nurgiyantoro, B. (2015). *Penilaian Pembelajaran Bahasa Berbasis Kompetensi*. Yogyakarta: BPFE.

Paivio, A. (2014). *Mind and Its Evolution: A Dual Coding Theoretical Approach*. Routledge.

Prabowo, A., & Sari, R. K. (2026). Inovasi pembelajaran bahasa Arab pada anak usia dini berbasis aktivitas konkret dan kontekstual. *Jurnal Pengabdian Masyarakat dan Riset Pendidikan,*

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License

4(1), 15–28.

Rahmawati, S., Zukhaira, & Busri, M. (2023). Penguasaan literasi bahasa Arab holistik melalui penguatan aspek psikomotorik pada anak usia dini. *Lisanul Arab: Journal of Arabic Learning and Teaching, 12*(2), 85–96.

Rohmawati, L. (2019). Pengaruh pengawas dan direksi wanita terhadap risiko bank dengan kekuasaan CEO sebagai variabel pemoderasi. *Syntax Literate: Jurnal Ilmiah Indonesia, 4*(9), 26–42.

Sadoski, M., & Paivio, A. (2013). *Imagery and Text: A Dual Coding Theory of Reading and Writing*. Routledge.

Sugiyono. (2018). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.

Taufik. (2011). *Pembelajaran Bahasa Arab Madrasah Ibtidaiyah*. Jakarta: Raja Grafindo Persada.

Copyright at authors some right reserved this work is licensed under a Creative Commons Attribution-Share Alike 4.0 International License